

REMARKS

Applicants have carefully reviewed the Application in light of the Office Action dated November 4, 2003. Claims 1-132 are pending and stand rejected. Applicants have amended Claims 1, 51, and 128. Applicants submit that no new matter has been introduced by these amendments. Applicants respectfully request reconsideration and favorable action in this case. Applicants submit that the pending claims are patentably distinguishable over the cited reference.

Section 103 Rejections

The Office Action has rejected Claims 1-132 under 35 U.S.C. § 103(a) as being unpatentable. Applicants respectfully traverse all rejections and assertions therein. Additionally, the Office Action asserts several definitions of claim terms. Applicants traverse such definitions to the extent they are inconsistent with established principles of claim interpretation.

Claims 1-6, 8-11, 15-16, 23-33, 35-37, 39, 42-44, 48-50, 51-56, 58-61, 63-66, 73-83, 85-87, 89, 92-94, 98-103, 108-109, 111-113, 117-120, 123, and 126-132 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 99/48310 to Puuskari ("Puuskari"). Applicants respectfully traverse this rejection and all assertions therein.

The Examiner has not met his burden of establishing a *prima facie* case of obviousness in making these rejections. According to M.P.E.P. §2143, to establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation to combine the references. Second, there must be a reasonable expectation of success. Third, the prior art combination of references must teach or suggest all the claim limitations. Applicant notes that the Examiner has failed to satisfy all three of the elements of non-obviousness, which are required to support a proper §103 analysis.

With respect to the third criterion of non-obviousness, the Examiner has not shown how the proposed combination teaches each and every limitation of the claimed invention. Independent Claim 1 has been amended to recite the limitations of Claim 10. Amended Independent Claim 1 recites, "determining for each packet based on the included flow identifier a location for a corresponding flow." For the teaching of this limitation, the Examiner offers the source and destination address in a packet. Office Action, Page 5.

Applicants submit that a location for a corresponding flow is not equivalent to an IP address. As is well known in the art, a mobile station as disclosed in *Puuskari* can have an IP address that traverses multiple locations. In particular, *Puuskari* discloses a wireless communication system that provides a mobile station access to external networks, hosts, or services offered by specific service providers. Page 1, Lines 7-13. A mobile station "first makes its presence known to the network by performing a GPRS attach." Page 1, Lines 32-33. During a GPRS attach, the mobile station activates "the packet data address that it wants to use, by requesting a PDP activation procedure context." Page 2, Lines 5-7. After establishing the mobile station's IP address, the mobile station may roam within the wireless network while maintaining the same IP address. Page 1, Lines 7-13. Accordingly, "a location for a corresponding flow" cannot be determined based on the sources and destination addresses offered by the Examiner.

Additionally, amended Independent Claim 1 recites, "assigning each packet to one of a plurality of virtual groups based on the location for the corresponding flow, the virtual groups comprising discrete transmission resources." The Examiner states that the QoS profiles as disclosed in *Puuskari* are virtual groups and equates discrete transmission resources as claimed "to at least individual treatment applied to any suitable set of the flow aggregates (in general)." Office Action, Page 4; Page 21, Lines 16-17. The QoS profiles offered by the Examiner are merely lists of static parameters indicating the level of service available for a packet. Page 2 Line 33 to Page 3 Line 8. In particular, a "QoS profile contains five parameters: service precedence, delay class, reliability, and mean and peak bit rates." *Id.* While this list of parameters may determine the treatment of a given packet in transit, this list of parameters do no comprise discrete transmission resources. Even if we assume for the sake of argument that the QoS profiles offered by the Examiner are virtual groups, a packet is associated with a QoS profile based on the data type, not the location for the corresponding flow. Page 4, Lines 1-23. Internet applications generate packets that include various data types, such as voice transmission, real-time video, compressed video, email transfer, file transfer, high priority control information exchange, etc. *Id.* Each data type has various QoS requirements resulting in associating a given data packet with a QoS profile. *Id.* Applicants submit that the location for the corresponding flow is not disclosed as a consideration when associating a QoS profile to a given packet containing a particular data type.

Amended Independent Claim 1 also recites, "queuing each packet in an assigned virtual group for transmission in the wireless network." As discussed in detail above, *Puuskari* does not teach, suggest, or disclose assigning virtual groups based on the location for the corresponding flow. Accordingly, *Puuskari* does not teach, suggest, or disclose queuing in a virtual group assigned to the packet based on the location for the corresponding flow. At most, each packet may be queued according to an associated QoS profile, which is based on the data type not the location for the corresponding flow. Page 2, Lines 18-22.

With respect to the first criterion of non-obviousness, the Examiner has not shown a suggestion or a motivation in the references or in the knowledge generally available to one of ordinary skill in the art to modify the cited reference. Nothing in *Puuskari* suggest or motivates the proposed modification. The Examiner merely states that "it would have been either inherent or obvious to a skilled artisan prior to applicant's invention to queue packets in general for the purpose or motivation of scheduling." Office Action, Page 4. However, there is no motivation to modify *Puuskari* because it does not teach, suggest, or disclose assigning and queuing a packet in an assigned group based on the location of the corresponding flow. *Puuskari*, in contrast, merely discloses that QoS levels may control queuing of packets. The Examiner is merely interjecting a subjective conclusory statement in an improper hindsight attempt at rejecting the claims without citing any language from any of the cited references to support the rejection.

With respect to the second criterion of non-obviousness, the Examiner has also failed to show a reasonable expectation of success for the proposed modification. The modification of *Puuskari* would not be capable of performing the operation required by the claimed invention. For example, there is no showing by the Examiner that the teachings of *Puuskari* would be able to determine a location for the corresponding flow based on the flow identifier; nor is there any disclosure relating to assigning virtual groups based on the location for the corresponding flow. The proposed modification (presumptively) attempts to combine divergent subject matter that has not been shown to be capable of operating according to any degree of predictability. The Examiner, without resorting to improper hindsight to look through the claimed invention, has not addressed the chance that the proposed modified *Puuskari* would have any success whatsoever, let alone a reasonable expectation of success as is required. Therefore, Applicant respectfully submits that the Examiner has failed to establish the second criteria for a *prima facie* case of obviousness.

Amended Independent Claims 51 and 128 are allowable for reasons analogous to those provided above. Claims 2-6, 8-11, 15-16, 23-33, 35-37, 39, 42-44, and 48-50 each depend from independent Claim 1 and are thus patentable over the cited art, for example, for at least the reasons discussed above with regard to Claim 1. Claims 52-56, 58-61, 63-66, 73-83, 85-87, 89, 92-94, and 98-100 each depend from independent Claim 51 and are thus patentable over the cited art, for example, for at least the reasons discussed above with regard to Claim 51. Claims 129-130 each depend from independent Claim 128 and are thus patentable over the cited art, for example, for at least the reasons discussed above with regard to Claim 128. Applicants respectfully request reconsideration and allowance of these claims.

Independent Claim 101 recites, "generating dynamic congestion control parameters for a wireless traffic queue based on a status of the wireless network." For the teaching of this limitation, the Examiner offers QoS information, the priority information and the traffic type information, disclosed in *Puuskari*. Office Action, Page 7; Page 6, Lines 9-11. However, neither the priority information nor the traffic type information is based on the status of the wireless network. In fact, the priority information has "two or more values indicating the importance of the packet and thus also defines the order in which data packets should be handled or discarded in case of network congestion." Page 6, Lines 11-14. The traffic type information "indicates requirements for the transmission of the packet," such as real-time and non-real-time traffic. Page 6, Lines 15-17. This QoS information is independently assigned by the Internet application that generates the corresponding packet and thus does not base the QoS information on the status of the wireless network. Accordingly, Applicants respectfully request the removal of the 35 U.S.C. § 103(a) rejection of Claim 101.

Furthermore, the Examiner has not shown a suggestion or a motivation in the references or in the knowledge generally available to one of ordinary skill in the art to modify the cited reference. Nothing in *Puuskari* suggest or motivates the proposed modification. The Examiner merely states that "it would have been obvious to a skilled artisan prior to applicant's invention to also handle the remaining wireless packets in general." Office Action, Page 7. However, there is no motivation to modify *Puuskari* because it does not teach, suggest, or disclose "adding remaining wireless packets for the wireless traffic queue to the wireless traffic queue." The Examiner is merely interjecting a subjective conclusory statement in an improper hindsight attempt at rejecting the claims without citing any

language from any of the cited references to support the rejection. Furthermore, the Examiner is precluded from modifying the teachings of *Puuskari* in an effort to teach the limitations of the pending claims because there is no indication in the reference as to the desirability of making such modifications. The cited references must disclose the desirability of making the proposed modification.¹⁰ The fact that the modification is possible or even advantageous is not enough.¹¹ A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.¹²

Independent Claim 111 is allowable for analogous reasons. Claims 102-103 and 108-109 each depend from independent Claim 101 and are thus patentable over the cited art, for example, for at least the reasons discussed above with regard to Claim 101. Claims 112-113 and 117-119 each depend from independent Claim 111 and are thus patentable over the cited art, for example, for at least the reasons discussed above with regard to Claim 111. Applicants respectfully request reconsideration and allowance of these claims.

Independent Claim 120 recites, "queuing a packet for a corresponding flow to a first location of a wireless network in a first queue associated with the first location." The Examiner does not offer a passage of *Puuskari* for the teaching of this limitation but merely states that "examiner has taken a reasonable but broad interpretation of the claimed subject matter with respect to a first and a second location." Even in light of the Examiner not providing a teaching of this limitation, Applicants offer the following arguments. *Puuskari* teaches, at most, that data packets may be queued in a queue associated with QoS levels, not a first location of a wireless network. As discussed in detail above, QoS parameters are based on data types, not locations for a corresponding flow.

In addition, the Examiner has not shown a suggestion or a motivation in the references or in the knowledge generally available to one of ordinary skill in the art to modify the cited reference. Nothing in *Puuskari* suggest or motivates the proposed modification. The Examiner merely states that "it would have been obvious ... to also move the packet into another queue since each queue is based on a different level of service." Office Action, Page 6. However, there is no motivation to modify *Puuskari* because it does not teach, suggest, or

10 *In re Mills*, 916 F.2d 680, 682 (Fed. Cir. 1990).

11 See *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

12 *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). (See also M.P.E.P. §2141.02).

disclose assigning and queuing a packet in an assigned group based on the location of the corresponding flow. *Puuskari*, in contrast, merely discloses that QoS levels may control queuing of packets, which, as discussed above in detail, QoS is not based on the location for a corresponding flow. The Examiner is merely interjecting a subjective conclusory statement in an improper hindsight attempt at rejecting the claims without citing any language from any of the cited references to support the rejection. Furthermore, the Examiner is precluded from modifying the teachings of *Puuskari* in an effort to teach the limitations of the pending claims because there is no indication in the reference as to the desirability of making such modifications. The cited references must disclose the desirability of making the proposed modification.¹⁰ The fact that the modification is possible or even advantageous is not enough.¹¹ A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.¹²

Independent Claim 123 is allowable for analogous reasons. Claims 126 and 127 each depend from independent Claims 123 and are thus patentable over the cited art, for example, for at least the reasons discussed above with regard to Claim 123. Applicants respectfully request reconsideration and allowance of these claims.

Claims 7, 34, 57 and 84 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Puuskari* in further view of U.S. Patent 6,327,254 to Chuah ("Chuah"). Claims 12-14, 17-18, 20-22, 45, 62, 67-68, 70-72, 95, 104, 107, and 114 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Puuskari* in further view of "Quasi-Static Resource Allocation with Interference Avoidance for Fixed Wireless Systems" by Chawla, et al. ("Chawla"), and in further view of U.S. Patent 6,021,309 to Sherman, et al. ("Sherman"). Claims 19 and 69 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Puuskari* in view of U.S. Patent No. 5,987,326 to Tiedemann, Jr., et al. ("Tiedemann"). Claims 38, 40, 88 and 90 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Puuskari* in view of U.S. Patent No. 5,926,458 to Yin ("Yin"). Claims 41, 91, 121, 122, 124

10 *In re Mills*, 916 F.2d 680, 682 (Fed. Cir. 1990).

11 See *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

12 *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). (See also M.P.E.P. §2141.02).

and 125 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Puuskari* in view of *Yin* in further view of "Service Scheduling for General Packet Radio Service Classes" to Pang, et al. ("Pang"). Claims 46-47, 96, 97, 105, 106, 110, 115, and 116 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Puuskari* in view of "Quality of Service Management Functions in 3rd Generation Mobile Telecommunication Networks" to Kalliokulju ("Kalliokulju"). Applicants respectfully traverse these rejections and all assertions therein. Each of these claims depend from an independent claim shown above to be allowable. The Office Action cites no teaching of the claim elements missing from the primary reference in the additional seven references cited. Accordingly, these claims are allowable as depending from allowable independent claims.

CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all the pending claims.

If the present application is not allowed and/or if one or more of the rejections is maintained, Applicants hereby request a telephone conference with the Examiner and further request that the Examiner contact the undersigned attorney to schedule the telephone conference.

Although Applicants believe no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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